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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,617	07/11/2006	Katsunori Mineno	2006_1046A	7764

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EXAMINER	
LIU, HENRY Y	

ART UNIT	PAPER NUMBER
4155	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/585,617	MINENO ET AL.	
	Examiner	Art Unit	
	HENRY LIU	4155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/23/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This is the first action on the merits for application 10/585617. Claim 1 is currently pending in this application.

Status of the Claims

Claim 1 is pending, of which **Claim 1** is in independent form.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being anticipated by DOMENICHINI (4,752,062) in view of CHAN (2002/0171223)

Regarding Claim 1, DOMENICHINI teaches “an auto-tensioner for engine accessories” as vehicle hydraulic shock absorbers. The reference anticipates the current application because it is contains all the structural components and is capable of performing the same functions of the claimed auto tensioner disclosed in the current application (MPEP 2114). DOMENICHINI teaches “a cylinder having an open top end” as a middle tube (14) (Col. 3, lines 13-18, Fig. 2) inside the shock absorber (10) (Col. 3, lines 13-18, Fig. 2). The open end is displayed in Fig. 2. DOMENICHINI teaches a “a sleeve having a bottom and inserted in said cylinder” as an inner tube (16) inside the shock absorber (10). DOMENICHINI teaches a “seal member mounted to said cylinder at said open top end to prevent leakage of hydraulic oil in said cylinder” as a piston (23) (Col. 3 lines 25-35, Fig. 2) fixed to a rod (24) (Col. 3 lines 25-35, Fig. 2) which extends in a sealed manner through the upper cylinder head. Hydraulic oil is in the shock absorber (Col. 4 lines 67-68, Fig. 2). Since the piston is sealed within the outer tube, the hydraulic oil is prevented from leaking. DOMENICHINI teaches "in said cylinder, a rod slidably extending through said seal member, a plunger connected to a bottom end of said rod so as to be slidable in said sleeve" as a piston (23) fixed to a rod (24) which extends in a sealed manner through the upper cylinder head (18) (Col. 3 lines 25-35, Fig. 2) which slides within the cylinder (16) (Col. 3 lines 25-35, Fig. 2). The piston (23) corresponds with the plunger in the current application. DOMENICHINI teaches a “plunger defining a reservoir chamber and a pressure chamber in said cylinder over and under said plunger, respectively" as an upper chamber (50) (Col. 3 lines 53-67, Fig. 2) and a lower chamber (46) (Col. 3 lines 53-67, Fig. 2). The pressure chamber is

corresponds to the lower chamber (32) (Col. 3 lines 53-67, Fig. 2) since it is below the piston (23). The reservoir chamber corresponds to the upper chamber (50) since it is above the piston (23). The piston (23) corresponds with the plunger and thus defines the reservoir and pressure chambers in the current application. DOMENICHINI teaches "and having a passage through which said pressure chamber communicates with said reservoir chamber" and "a check valve provided at said passage to close said passage when a pressure in said pressure chamber exceeds a pressure in said reservoir chamber " as a valve containing piston (23) which, during extension, the oil is made to pass from the upper chamber (46) by way of the members for regulating braking of the valve containing piston (23) (Col. 5 lines 8-11, Fig. 2, Fig. 3, Fig. 4). During compression, the hydraulic oil in the shock absorber is made to pass through the main compression valve and conveyed to the compensation chamber through the communication ducts (88) (Fig. 3, Fig. 4), (90) (Fig. 3, Fig. 4), the lateral passage (91) (Fig. 3, Fig. 4), the annular space (68) (Fig. 3, Fig. 4) and the passage (70) (Fig. 3, Fig. 4), thus the hydraulic oil does not pass through the valve containing piston (23), during compression (Col. 4 lines 67-68, Col. 5 lines 1-4, Fig. 2, Fig. 3, Fig. 4).

DOMENICHINI does not teach "a return spring mounted around said cylinder to bias said rod outwardly of said cylinder"

CHAN teaches a spring (40) around the shock absorber (Fig. 1, Fig. 2, Fig. 3, Fig. 4).

It is obvious to one of ordinary skill in the art at the time the invention was made to combine the shock absorbers in DOMENICHINI with the spring in CHAN because it is

well known in the art that shock absorbers for an automotive suspension use springs on the outside of the outer tube. There is motivation to combine since the spring is required for the automobile's suspension to work at all when dampers such as the one in DOMENICHINI are used. The combination results in predictable results since the spring mounted around the cylinder is the most common embodiment when using a shock absorber in an automobile suspension.

DOMENICHINI teaches “a return chamber is defined under said sleeve so as to communicate with said reservoir chamber” as an annular space (68) defined between the two parts (58) (Fig. 3, Fig. 4) and (60) (Fig. 3, Fig. 4) of the valve-containing body and communicates with the interspace or compensation chamber (44) through a passage (70) (Fig. 3, Fig. 4). The valve (62) (Fig. 3, Fig. 4), shown in broken lines since it is not located in the sectional plane of Fig. 3, is an automatic compensation valve which opens so that the compensation chamber (44) communicates with the lower chamber (46), in a known manner, during extension of shock absorber (Col. 4 lines 14-23, Fig. 2, Fig. 3, Fig. 4). The DOMENICHINI teaches “bottom of said sleeve being formed with a valve hole” as an auxiliary compression valve (66) (Fig. 3). The valve necessarily has a valve hole when the valve opens. It can be seen in Fig. 3. DOMENICHINI teaches “through which said return chamber communicates with said pressure chamber” as downstream of the disk (84), a communication duct (91) serves to establish a communication between the lower chamber (46) and the annular space (68) and compensation chamber (44) when the valve (66) is open (Col. 4 lines 58-68, Fig. 2, Fig. 3). The communication duct (91) and annular space (68) can be interpreted

as the return chamber. DOMENICHINI teaches " comprising a relief valve provided at said valve hole to open said valve hole if the pressure in said pressure chamber exceeds a set pressure" as an auxiliary compression valve (66) designed to open during contraction of the shock absorber. The valve (66) includes an obturator disk (92) biased by a rigid spring (94). The auxiliary compression valve (66) opens to prevent total blockage of the shock absorber. In practice, the shock absorber passes from a state where it is softer to a state where it is more rigid and hence its damping force during compression when rolling occurs is greater than that during compression when jerking occurs (Col. 5 lines 46-58).

Conclusion

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. SMITH (6,361,458) teaches a tenshioner with the same vibration damping mechanism as the current application (Fig. 1). MORADMAND (5,921,360) teaches the piston valve allowing the tenshioner to extend quickly (Fig. 1). BARBISON (2004/0251097) teaches the communication between the return chamber and the chamber above the piston (Fig. 1). MORADMAND (2002/019388) teaches the combination of the pressure release valve, the piston valve and channels outside the sleeve (Fig. 1).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HENRY LIU whose telephone number is (571)270-7018. The examiner can normally be reached on Mon-Thurs 7:30am - 5:00pm ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on 572-272-6967. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HENRY LIU/
Examiner, Art Unit 4155

/Thu Nguyen/
Supervisory Patent Examiner, Art Unit 4155